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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,136	11/26/2001	James C. Lyke	PRS078	4093

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EXAMINER

MAI, TAN V

ART UNIT PAPER NUMBER

2124

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DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,136

Applicant(s)

LYKE ET AL.

Examiner

Tan V Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. The abstract of the disclosure is objected to because the Abstract contains the undefined acronyms "ADC" and "DAC". All such acronyms should be defined at the instance of their first use within the Abstract. Correction is required. See MPEP § 608.01(b).

2. The drawings are objected to because the number "12c" in Fig. 14 should be -- 14c--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities:

In "**Brief Description of Drawings**"; Fig. 3 and Fig. 7 should be mentioned.

The numbers "FIG. 13 shows ... (11a) ... and (11b)" (Paragraph [0032]) should be -- ...(13a) ... and (13b)--

Appropriate correction is required.

4. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the claim language seems to be vague and indefinite. For instance, although the claim recites "plurality of **digital** programmable switching devices" (line 4), the claim7 also recites "one or more **analog**-to-digital converters" (line 7) [coupled to the "plurality of **digital** programmable switching devices"]. Do the "plurality of **digital** programmable switching devices" provide **analog** results? Does the

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claim omit essential elements? See MPEP 2172.01 for "incomplete" claim. The terms "**may be**" (line 8) and "**can inject**" (line 11) are indefinite.

As per claim 4, it seems to be **BOTH** the "**digital-to-analog converters**" (lines 8-9) and "**analog-to-digital converters**" (line 11) coupled to FPID. Does the FPID provide both **digital** and **analog** results? The terms "**may be**" (line 12) and "**can inject**" (line 9) are indefinite.

As per claim 5, the claim language is vague and indefinite. For instance, although the preamble of claim 5 claims "a method of **solving Poisson partial differential equation**", the claim fails to recite the necessary detail step(s) (or physical structures) to perform the recited function(s) nor are there any recitation describing how such step(s) (or elements) is actually provided in the method. Sufficient detail step(s) or elements must be recited to adequately describe and constitute the proposed method. What is the result of the method? Therefore, the claim is incomplete in that it recites only a portion of the methodology required for the method to become operational, i.e., it omit essential steps. See MPEP 2172.01.

5. Claims 1-5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited references are art of interest.

7. The following is an examiner's statement of reasons for allowance: the recorded references do NOT teach or suggest the apparatus / method for solving "**Laplacian /**

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Poisson partial differential equation" having "Dirichlet boundary conditions"

feature as recited in independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final (703) 746-7238

Official (703) 746-7239

Non-Official/Draft (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



TAN V. MAI
PRIMARY EXAMINER